Animal Pharm

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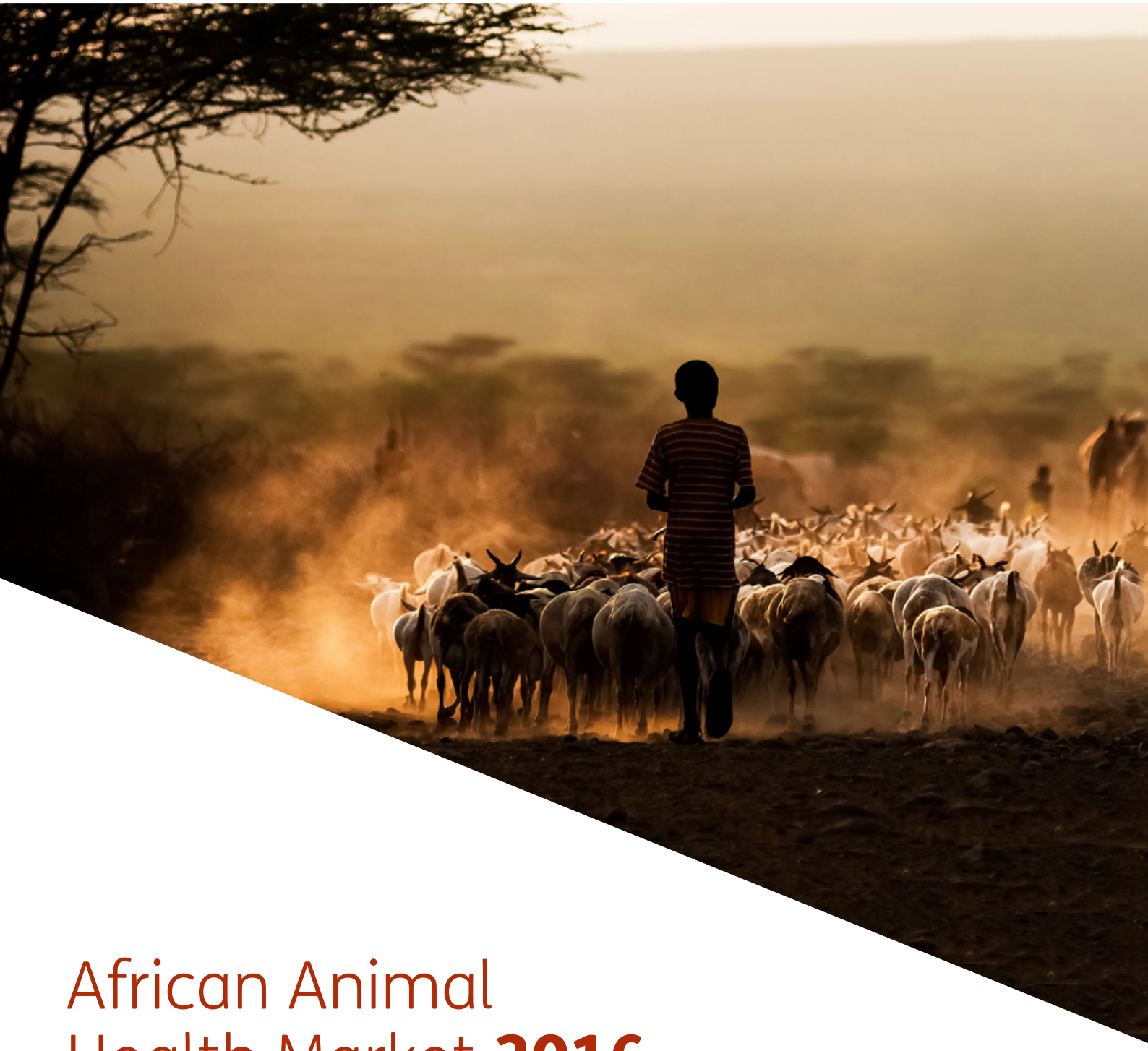


African Animal Health Market **2016**

Livestock production; Veterinary services; Important animal diseases; Animal health products and market needs in Africa; Regulation; Trends and future outlook

Contents

Tables & Figures

Executive Summary

Broadly speaking the African market has not been an attractive proposition for the animal health industry due to perceived lack of value and high risks and barriers to entry. However, the African economy is growing rapidly.

South Africa was a member of the BRICS grouping of emerging economies (with Brazil, Russia, India and China) and Nigeria in the next wave of MINT (with Mexico, Indonesia and Turkey). Other African countries like Morocco, Kenya and Uganda are also growing rapidly.

This report examines the current and potential animal health market in Africa. Sub-Saharan Africa comprises some of the poorest countries of the world with a population that is destined to increase exponentially in the coming decades with the concurrent increasing demand for food. In line with the other emerging economies, this will be accompanied by increasing demand for high quality animal protein as countries develop their wealth and middle classes emerge.

The report begins with a brief review of the global animal health industry and then discusses in detail the African market, demographics, growth drivers for African livestock, animal production systems and the need for veterinary medicines. Production statistics for cattle, sheep and goats, pigs, poultry, companion animals and aquaculture are reviewed together with a discussion of animal types by region and country. There is a review of veterinary legislation and the need for improved veterinary services. The important animal diseases are covered, focussing mainly on tropical diseases but also reminding the reader that the production diseases of parasitism, respiratory and enteric disease are just as important as they are in developed countries. Diseases are discussed in the context of being vector-borne, zoonoses, transboundary etc.

There is a description of the animal health industry in Africa including both global and regional companies. The regulatory systems for animal health products are described and their status is highly variable between countries but in general there is relevant legislation but with some exceptions it is often not implemented or enforced rigorously. There are embryonic attempts at regional mutual recognition processes but in general these do not yet work well.

To many companies Africa has been unattractive due to the problems of low market value and density, poor regulation, corruption, fake and counterfeit products, poor distribution networks, ineffective cold chain etc. However, others are grasping the opportunities and doing very well in finding valuable niches e.g. the poultry vaccine segment.

Thus it is clear that there are huge opportunities but also huge challenges. The overall economies of Africa will grow exponentially and inexorably in the coming decades and this will be partly driven by the increasing needs of the growing population. The continent will continue to be highly dependent on livestock for food and other purposes.

In turn, there are many diseases and other factors limiting productivity which will have to be addressed. While sustainable intensification is probably the main goal, it will also be necessary to continue to support the smallholder farmer sector in Africa, with all the issues of 'last mile' accessibility, lack of infrastructure and professional services and the cold chain. It is unlikely that the private animal health sector can transform the market on its own. It is much more likely to continue to need additional support from NGOs and donors in public private partnerships.

However, economic growth is inevitable and the animal health industry should rise to the challenge. Africa is the final frontier.

Figure 2. Distribution of Animal health care market by territory 2014 (data source Statista 2016)

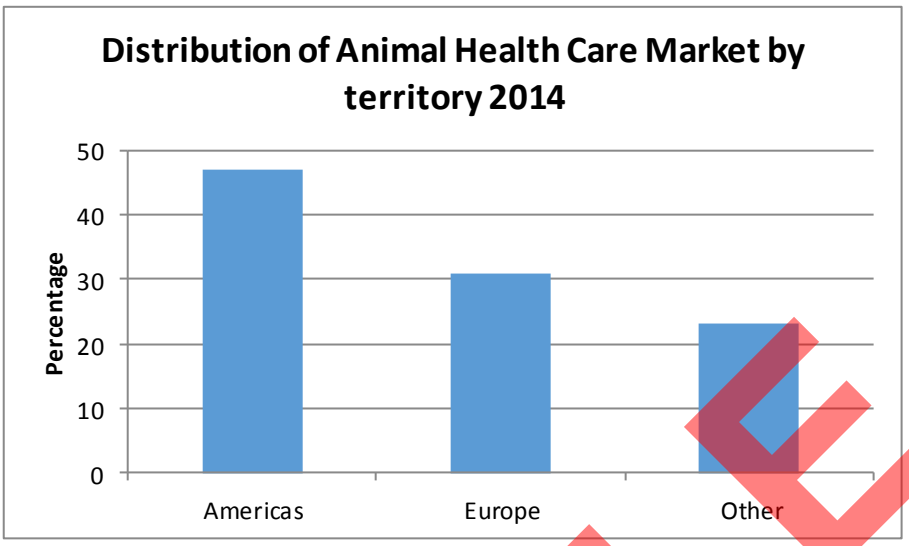
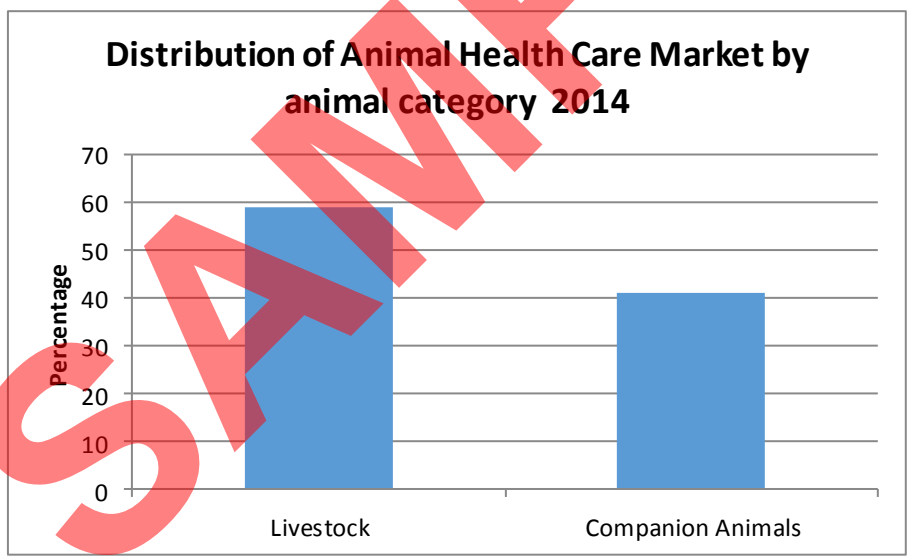


Figure 3. Distribution of Animal health care market by territory 2014 (data source Statista 2016)



On average globally, approximately one-fortieth of the amount devoted to the development of human medicines is spent on animal medicines. That investment is used to cover animal health innovations for the world's 24 billion chickens, more than 1 billion cattle and sheep, 750 million pigs and goats, 500 million dogs and 400 million cats (data source: Animal Health Institute http://www.ahi.org/about-animal-medicines/industry-statistics/).

2. The African market

2.1 Demographics

An estimated 2.6 billion people in the developing world have to make a living on less than $2 a day; of these people, about 1.4 billion are extremely poor, surviving on less than $1.25 a day each (FAO 2012).

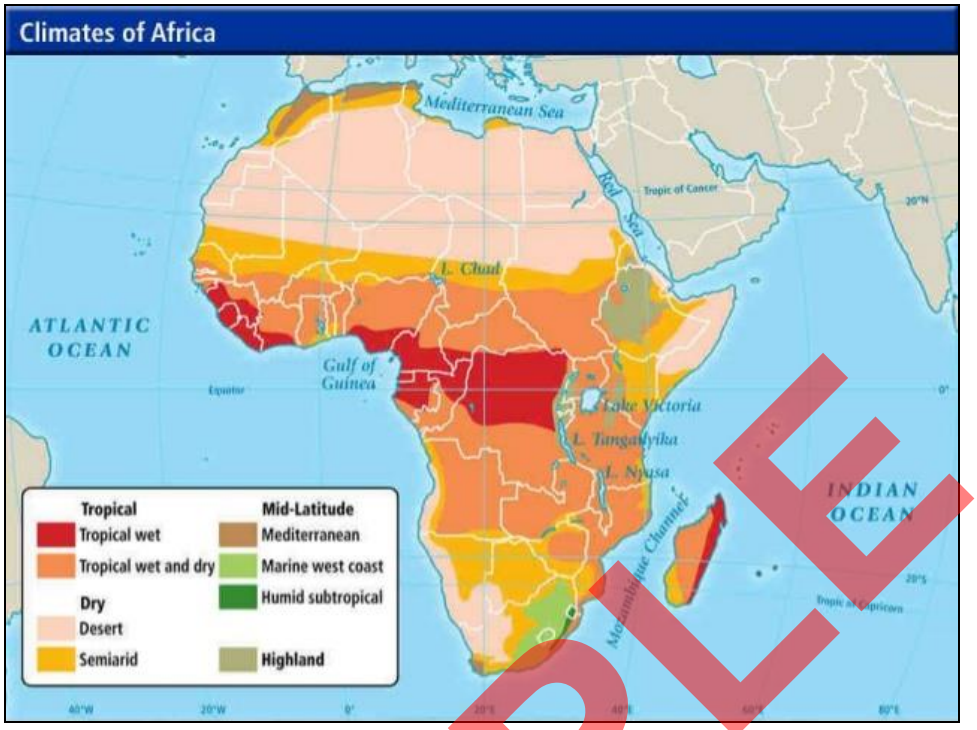
Almost 75% of the extremely poor live in rural areas and despite growing urbanisation, more than half of the 'dollar poor' will reside in rural areas until about 2035. Most rural households depend on agriculture as part of their livelihood and livestock commonly form an integral part of their production system (FAO 2011).

In recent decades, the world food economy has seen a shift towards increased consumption of animal-source foods. In developing countries, the meat and dairy sectors have grown at average yearly rates of 5.1% and 3.6% respectively since 1970 (Alexandratos & Bruinsma, 2012).

The combination of low per capita food consumption and high population growth in several countries of sub-Saharan Africa can be a serious constraint to improving food security, especially where semi-arid agriculture is predominant and import capacity is limited. According to the World Bank (2015), animal agriculture is the only means of livelihood for poor people in many agro-ecological areas.

Improvement in crop yields, livestock productivity and animal health will be essential to end poverty. Up to 30% of people in sub-Saharan Africa are undernourished, the highest rate anywhere in the world. Reducing livestock losses helps to preserve a critical capital asset and source of income and food for poor people.

Figure 13. Map of Africa showing the main climatic regions



Africa has a large and diverse population of wild animals, carnivores (e.g. lion, hyena, and cheetah) and herbivores (e.g. buffalo, elephant, camel, and giraffe) ranging freely on primarily open plains. It is also home to a variety of jungle animals including snakes and primates, as well as aquatic life such as crocodiles and amphibians.

The African Union (AU) is a 54-member federation, established in 2002 and consisting of all of Africa's states except Morocco. Although it has abundant natural resources, Africa remains the world's poorest and most underdeveloped continent. Sub-Saharan Africa is the least successful region of the world as far as reducing poverty. The United Nations have categorized Africa with six geographical sub regions and these are described in Table 5 and illustrated in Figure 7. In the latter the Horn of Africa and east Africa are categorised as one region.

4. African livestock production statistics

4.1 Species and breeds

Africa has a large number of different local cattle, sheep and goat breeds and a number of exotic breeds that have been introduced to several countries over the past few centuries.

Table 7. Total populations of various domestic species in Africa 2014 (source FAOSTAT)	
Species	**Total population**
Chickens	1,863,072,000
Cattle and Buffalo	314,236,540
Sheep and Goats	704,840,927
Pigs	34,536,408

Table 8. Regional livestock populations (2014) in Africa (data source FAOSTAT, World Bank)						
Region	Country	Human*	Chickens (x000 head)	Cattle and Buffalo	Sheep and Goats	Pigs
Southern Africa	South Africa	54,000,000	2000,000	14,250,000	26,125,000	1,625,000
	Botswana	2,220,000	1,000	2,100,000	1,780,000	3,100
Northern Africa	Morocco	33,920,000	187,000	3,238,700	25,378,000	8,000
	Egypt	89,580,000	140,600	8,704,000	9,823,000	10,600
East Africa	Tanzania	51,820,000	36,000	25,000,000	24,250,000	505,000
	Kenya	44,860,000	42,413	17,811,845	42,850,265	430,844
	Malawi	16,700,000	18,000	1,305,000	5,760,000	2,800,000
West Africa	Ivory Coast	22,160,000	62,000	1,587,000	3,140,000	370,000
	Nigeria	177,500,000	170,000	19,450,000	111,550,000	6,850,000
Central Africa	Cameroon	22,770,000	50,000	5,950,000	8,690,000	1,800,000
	Chad	13,590,000	6,100	7,850,000	10,100,000	33,500

5.1.2.6 *Nigeria*

The veterinary services of Nigeria are managed at Federal level (CVO) and State level (DVS). The Federal services have responsibility for disease control and trans-boundary animal diseases, in partnership with states and legislation development. The Veterinary Council of Nigeria (VCN) state that there are about 7,000 vets in Nigeria only 4,250 are registered with the Association, of whom 1,000 are in teaching and research; 2,000 are in Federal/State/local government; and only about 1,000 are involved in veterinary work. Most private vets are localized in big cities and in private extension services in rural areas.

Although the veterinary service delivery was free until 1994, farmers are now willing to pay for services/vaccines, e.g. for CBPP vaccination. Private veterinarians are mainly involved in the supply and distribution of veterinary drugs, vaccines, equipment and livestock feeds, and in the provision of routine clinical services, preventative care for livestock and consultancy services.

All drugs and medicines manufactured, imported, stored or advertised for sale in Nigeria must be registered with the National Agency for Food and Drug Administration and Control (NAFDAC). Vaccines registered by NAFDAC are always available, but there is strong competition from some cheaper vaccines from India and China.

5.1.2.7 *Ghana*

The veterinary service of Ghana was restructured in 1997 as a decentralized service. The Food and Drugs Law ensures that only registered drugs may be sold. The scientific requirements for registration include data on quality, clinical efficacy and safety. In addition, the registration holder must keep accurate records of drug distribution, which must be available for inspection. The Veterinary Services Department (VSD) issues permits for the importation and sale of all categories of veterinary drugs. Sales and distribution of veterinary products (vaccines, medicines and diagnostics) are conducted by the private sector.

However, vaccine sales and distribution are still controlled by the VSD (GALVMed 2015). The Veterinary Council of Ghana is concerned with veterinary practice and practitioner standards. It also regulates the practise of veterinary medicine and the improvement of veterinary services in the country. Private veterinarians can import animal health products and equipment, with the exception of live vaccines that are part of the Director of veterinary services mandate.

5.2 The Inter African Bureau for Animal Resources

The Inter African Bureau for Animal Resources (AU-IBAR) was initiated in 1951, under the name of Inter African Bureau of Epizootic Diseases (IBED), to study the epidemiological situation and fight Rinderpest in Africa. The AU-IBAR's mandate now covers all aspects of animal resources, including livestock, fisheries

Figure 34. The *T. parva* lifecycle (after Nene et al., 2016)

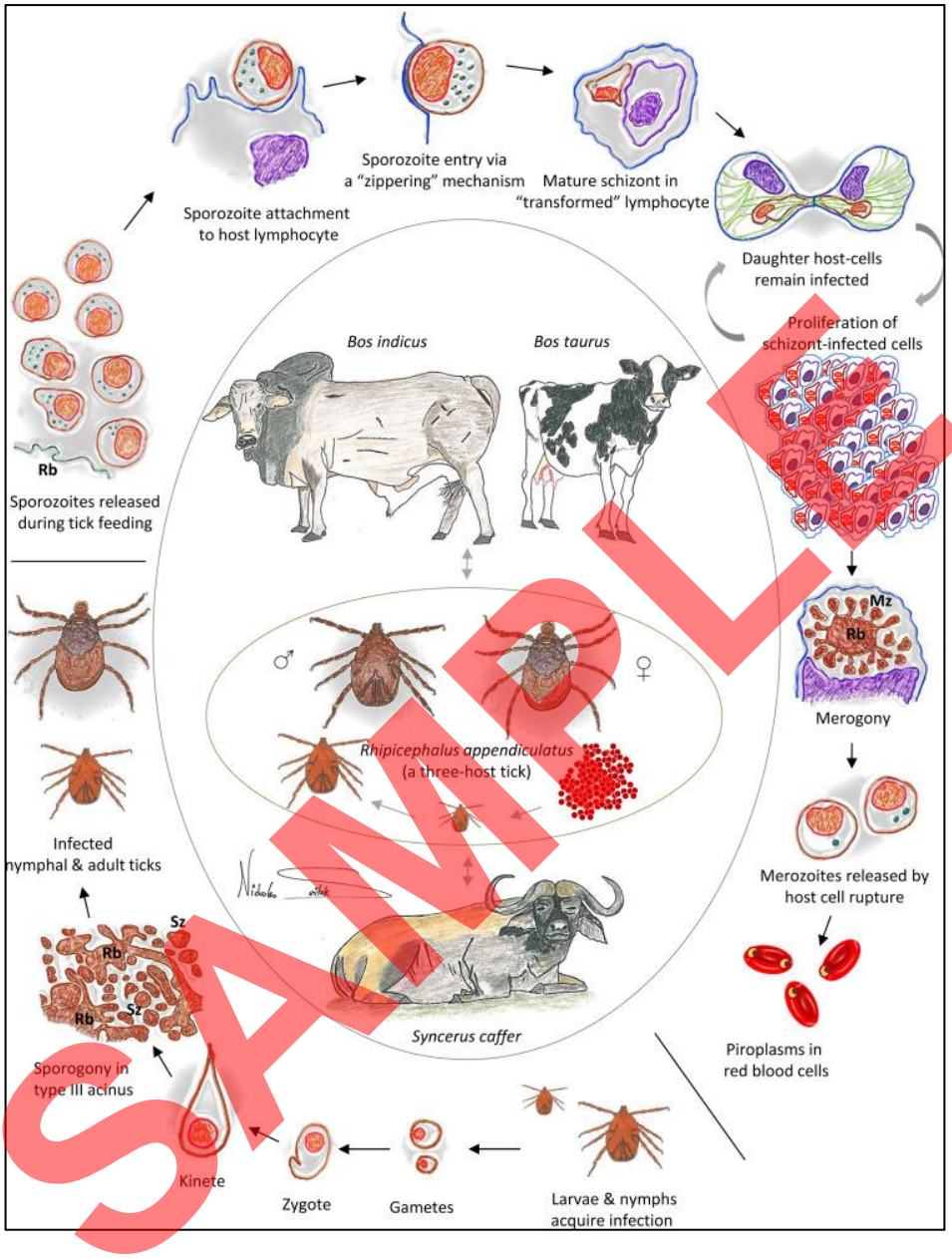


Table 14. Reported losses to major transboundary diseases in Africa			
Combined Financial Losses	**Disease**	**Description**	**Species**
High Smallholder losses (over $800 million)	Newcastle Disease	Greatest problem for village poultry, Newcastle disease is a continual threat to smallholder flocks and discourages additional smallholder investment in poultry.	Poultry
	Gastrointestinal endoparasites (helminths)	Effective control of endoparasites can result in substantial productivity gains for smallholder farmers.	Cattle, sheep, goats and poultry
	Ectoparasites	In addition to spreading disease, ectoparasites reduce livestock productivity through reduced weight gain and reduced quality for hides and fibres.	Cattle, sheep, goats and poultry
Medium Smallholder losses ($400-$800 million)	Peste de Petits Ruminants	PPR is a highly contagious viral disease with mortality and morbidity resulting in heavy losses.	Goats and sheep
	East Coast Fever	A serious often fatal tick-borne parasitic disease of cattle that causes major economic losses in Eastern, central and Southern Africa.	Cattle
	Trypanosomiasis	Caused by Trypanosoma and transmitted by tetse flies is endemic in parts of Africa. The disease results in chronic illness, reduces productivity and death.	Cattle, sheep and goats
	Contagious Bovine Pleuropneumonia	Highly contagious respiratory disease affecting cattle, considered one of the most economically important diseases of cattle in Africa.	Cattle
	Foot and Mouth Disease	Highly contagious viral disease that restricts trade, results in rapid loss of condition and productivity. High mortality in young animals.	Cattle, sheep and goats
	Brucellosis	Infection typically results in abortion and other reproductive disorders in livestock. Significant zoonotic threat.	Cattle, sheep and goats
	Contagious Caprine Pleuropneumonia	One of the most severe diseases of goats. CCPP causes major economic losses in Africa, Asia and the Middle East.	Goats and sheep

8. Regulation of veterinary medicines in Africa

Registration systems and procedures are constantly being put into place and/or evolving in African countries. However, although the majority of African countries now have registration systems or related legislation in place, many of them do not effectively regulate the use of veterinary products in the country.

Some progress has been made towards developing regional registration standards for veterinary products in southern, western and eastern Africa for example, the West African Economic and Monetary Union (UEMOA) have introduced a centralised system of registration of veterinary products, with requirements similar to those for registration in the EU.

Africa has been plagued by poor quality and counterfeiting of veterinary medicines. The free distribution of over the counter (OTC) products is believed to have led to high levels of resistance especially against tetracycline and ivermectin products.

In South Africa, the sale and supply of veterinary drugs is regulated according to the provisions Act 36 (1947), Act 101 (1965) and the veterinary and paraveterinary Act of 1982. Act 101 regulates the provision of medical and veterinary vaccines and is administered by the Ministry of Health. The process of registration can take up to three years as there is a requirement for efficacy studies to be run over a minimum of two seasons in different climatic regions. South Africa leads the regional effort to standardise its regulatory procedures and has representation on various bodies concerned with global livestock and pharmaceutical standards. Some countries with no regulatory authorities of their own (Botswana, Lesotho, Swaziland) have harmonised standards with South Africa.

The regulation of veterinary pharmaceuticals in Kenya, Malawi and Tanzania is under the control of institutions (Pharmacy Boards) under the Ministry of Health. The pharmacy boards have jurisdiction over the registration of pharmacists; registration of drugs; regulation of the manufacture and importation of drugs; licensing of wholesalers and retailers of drugs; licensing of premises authorized to store and sell drugs; appointment of inspectors to supervise compliance with regulations for the sale of drugs; and the maintenance of a list of poisons that is authorized by the Minister for Health.

Often, in countries where the regulation of veterinary pharmaceuticals is by institutions within the Ministries of Health, the veterinary profession is underrepresented and registration of livestock health products is rarely a priority. The distribution of livestock health products is tightly controlled by pharmacists, and it is illegal for veterinary surgeons to distribute veterinary pharmaceuticals in the absence of a registered pharmacist. In Uganda the National Drug Authority is responsible for the registration of veterinary drugs, however, only 300 drugs have been registered since 1993.

